

NILANJAN CHATTARAJ, Ph.D.

Assistant Professor,

Smart Mechatronics & MAV Lab

Department of Electronics & Communication Engineering,
Also Affiliated with Centre of Excellence on IoT & Intelligent Systems,
Biomedical Engineering & Assistive Technology Centre,
National Institute of Technology Durgapur, India

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[Google Scholar Page](#)

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[LinkedIn Profile](#)



Nilanjan Chattaraj is Assistant Professor in the Department of Electronics & Communication Engineering of National Institute of Technology Durgapur. He is also associated Faculty Member of Centre of Excellence for Biomedical Engineering & Assistive Technology and Centre of Excellence on IoT & Intelligent Systems of National Institute of Technology Durgapur, and Adjunct Faculty member of SP Jain School of Global Management. Prior to this, he worked as an Assistant Professor in the Department of Electrical & Electronics Engineering of Birla Institute of Technology & Science, Pilani, and a Post-Doc Fellow in the Department of Aerospace Engineering of Indian Institute of Science, Bangalore. He also has industry experience as Software Engineer consultant with Motorola

through Satyam Computer Services Ltd. Dr. Chattaraj received B.E. degree in Electronics & Communication Engineering from National Institute of Technology Durgapur, M.S. degree from the Department of Electronics & Electrical Communication Engineering of Indian Institute of Technology, Kharagpur and Ph.D. from the Department of Aerospace Engineering of Indian Institute of Science, Bangalore. His research interest includes Smart-materials based Sensors and Actuators, Structronics, Smart Mechatronics, Soft-Robotics, Smart Cyber Physical Systems following both theoretical and experimental approaches. Dr. Chattaraj also served as the Editor of Institute of Smart Structures and Systems (ISSS)'s Newsletter. Dr. Chattaraj has authored over 30 research publications and has been involved in several sponsored projects in areas such as IoT-based systems, assistive technologies, and smart devices.

EXPERIENCE

2022 – TILL DATE

ASSISTANT PROFESSOR GRADE-I,

NATIONAL INSTITUTE OF TECHNOLOGY, DURGAPUR

2018 – 2022

ASSISTANT PROFESSOR GRADE-II,

NATIONAL INSTITUTE OF TECHNOLOGY, DURGAPUR

2016 – 2018

ASSISTANT PROFESSOR,

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI

2015 – 2016

POSTDOCTORAL RESEARCH ASSOCIATE,

INDIAN INSTITUTE OF SCIENCE, BANGALORE

2005 – 2007

SOFTWARE ENGINEER,

SATYAM COMPUTER SERVICES LTD.

EDUCATION

2010 – 2015

Ph.D.

Doctoral Advisors:

Prof. Ranjan Ganguli, Prof. G. K. Ananthasuresh

DEPARTMENT OF AEROSPACE ENGINEERING

INDIAN INSTITUTE OF SCIENCE, BANGALORE

2008 – 2010

M.S.,

Thesis Advisor

Prof. A. S. Dhar

**DEPARTMENT OF ELECTRONICS & ELECTRICAL
COMMUNICATION ENGINEERING**

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

2001 – 2005

B.E.,

**DEPARTMENT OF ELECTRONICS & COMMUNICATION
ENGINEERING**

NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

RESEARCH INTEREST

- Smart materials-based devices and Structronic Systems
- Electromechanical Devices and systems
- Smart Mechatronics
- Smart Cyber-Physical Instrumentation
- System Design and Product Development

OUR RESEARCH LAB

SMART MECHATRONICS & MAV LAB

Lab Members

- Dr. Nilanjan Chattaraj
 - Dr. Debabrata Bej (Alumni)
 - Dr. Shatrughan Jaiswal (Post Doc)
 - Suman Biswas (Ph.D. Student)
 - Neha Kumari (Ph.D. Student)
 - Mrinal Goswami (Ph.D. Student)
 - Sourav Pal (Ph.D. Student)
 - Al Mamun Sheikh (Ph.D. Student)
 - Bodhiswatta Rakshit (Ph.D. Student)
 - Sai Bharadwaj (JRF)
 - Pritam Sarkar (RA)

ACTIVITIES

Sponsored Projects

1. Dr. Nilanjan Chattaraj (As Chief Investigator),
Capacity building for human resource development in Unmanned Aircraft System
(Drone and related Technology) (Multi-institute Project).
Funded by MeitY,
Status: Ongoing
2. Dr. Nilanjan Chattaraj (As Principal Investigator),
Assistive technology on universal multimodalities.
Funded by TCS Innovation Lab, Mumbai
Status: Ongoing
3. Dr. Nilanjan Chattaraj (As Principal Investigator),
Performance evaluation of open-source LID, speaker diarization and speech enhancement
algorithms,
Funded by CAIR Lab, DRDO, Bangalore
Status: Completed
4. Dr. Nilanjan Chattaraj (As Co-Principal Investigator),
Design of a Smart Material based Soft Lower Limb Exoskeleton to Assist Soldier,
(As Co-Principal Investigator),
Funded by JCBCAT, DRDO,
Status: Completed

PUBLICATION

Journals (SCI)

1. Biswas, S., Kumar Mahanti, G., & Chattaraj, N. (2025). Extreme Learning Machine Model For Multi-Fault Diagnosis of Analog Circuits. *Journal of Electronic Testing*, 41(2), 221-239.
2. Chattaraj, N. (2025). SMA Actuated Bi-Stable Electromechanical Mechanism Design for High-Current Circuit-Breaker Switching Application. *Journal of Vibration Engineering & Technologies*, 13(4), 229.
3. Debabrata Bej, Nilanjan Chattaraj, and Rishiv Sahu, (2024). Design of an Economic, Portable, Compact, and Indigenous Instrument Setup for Measuring Sensing Characteristics of Thin Film Gas Sensors. *Review of Scientific Instruments (AIP)*, pp. 1-10, 2024
4. Biswas, S., Mahanti, G. K., & Chattaraj, N. (2023). Investigation of Extreme Learning Machine-Based Fault Diagnosis to Identify Faulty Components in Analog Circuits. *Circuits, Systems, and Signal Processing*, 1-18.
5. Bej, D., Chattaraj, N., Mahapatra, R., Mondal, M. K., & Ghosh, C. (2023). Fabrication of a CO₂ Gas Sensor Based on ZnO Thin Film from the Perspective of Sensing Vehicle Tailpipe-Emitted Pollution. *Journal of Electronic Materials*, 52(6), 3983-3990.
6. Debabrata Bej, Nilanjan Chattaraj, "Air Pollution from Vehicle-Tailpipe Emissions and Diagnostic Approaches through Cyber-Physical Platform - A Review", *Microprocessors and Microsystems, Elsevier, (SCI)*, 2023

7. Nilanjan Chattaraj, Ranjan Ganguli, "Mechatronic Approaches to Synthesize Biomimetic Flapping-wing Mechanisms: A Review", *International Journal of Aeronautical & Space Sciences (SCI)*, Springer, 2022,
8. Nilanjan Chattaraj, "Infra-Narrow Band Mechanical Oscillation Measurement System using Gravity-Loaded Piezoelectric Transducer ", *Journal of Vibration Engineering & Technologies*, Springer, pp. 1-11, 2022.
9. Harsh Dokania, Nilanjan Chattaraj, "An Assistive Interface Protocol for Communication between Visually and Hearing-Speech Impaired Persons in Internet Platform", *Disability and Rehabilitation: Assistive Technology*, pp. 1-14, 2022.
10. Arnab Roy Chowdhury, Soumyadeep Mondal, Aryan Kanu, Sanniva Bhattacharjee, Nilanjan Chattaraj, Nirmal Baran Hui, "Piezoelectric Energy Harvesting by Utilizing Angular Speed Variation in High-speed Rotating Beams ", *Journal of Vibration Engineering Technologies*, Springer, 2022.
11. Nilanjan Chattaraj, "Experimental Investigation and Empirical Analysis of a Shape Memory Alloy Actuated Electromechanical Oscillator", *Journal of Vibration Engineering & Technologies*, Springer, 1-10, 2021.
12. Nilanjan Chattaraj, G. K. Ananthasuresh, and Ranjan Ganguli. "Design of a distributed compliant mechanism using spring-lever model and topology optimization for piezoelectrically actuated flapping wings." *Mechanics of Advanced Materials and Structures*, Taylor & Francis, 28.2 (2021): 118-126.
13. Nilanjan Chattaraj, and Ranjan Ganguli. "Performance improvement of a piezoelectric bimorph actuator by tailoring geometry." *Mechanics of Advanced Materials and Structures*, Taylor & Francis, 25.10 (2018): 829-835.
14. Nilanjan Chattaraj and Ranjan Ganguli. "Multi-objective optimization of a triple layer piezoelectric bender with a flexible extension using genetic algorithm." *Mechanics of Advanced Materials and Structures*, Taylor & Francis, 25.9 (2018): 785-793.
15. Nilanjan Chattaraj and Ranjan Ganguli. "Effect of self-induced electric displacement field on the response of a piezo-bimorph actuator at high electric field." *International Journal of Mechanical Sciences*, Elsevier, 120 (2017): 341-348.
16. Nilanjan Chattaraj and Ranjan Ganguli. "Electromechanical analysis of piezoelectric bimorph actuator in static state considering the nonlinearity at high electric field." *Mechanics of Advanced Materials and Structures*, Taylor & Francis, 23.7 (2016): 802-810.
17. Nilanjan Chattaraj and Ranjan Ganguli. "Active filter driver for piezo-actuators for flapping-wing micro air vehicles." *International Journal of Micro Air Vehicles*, Sage, 8.1 (2016): 21-28.

Conferences

1. Sheikh, Almamun, Suman Samui, and Nilanjan Chattaraj. "Exploring the Potential of State-of-the-Art Speaker Diarization Frameworks for Multilingual Multi-Speaker Conversations." 2025 2nd International Conference on Circuits, Power and Intelligent Systems (CCPIS). IEEE, 2025.
2. Shubhranshu Gorai, Suraj Raj, Vidyarnab Bagchi, sujoy saha, Nilanjan Chattaraj, Charudatta Jadhav, Kunal Srivastava, Vijay Raut, "Hand-Gesture Based HCI for Application Control with Custom Action Mapping in Multi-modal Input-Interface", *5th International Conference on Frontiers in Computing and Systems (COMSYS-2024)*, Goa, 13th - 15th December 2024
3. Mrinal Goswami, Sivam Das, Nilanjan Chattaraj, Sujoy Saha, Charudatta Jadhav, Kunal Srivastava, and Vijay Raut, "Hand-Gesture Identifying Wearable-Input Device for OS-Platform Independent Generic HCI Application in a Multi-modal Platform", *6th International Conference on Soft Computing and its Engineering Applications (icSoftComp2024)*, December 10-12, 2024, Bangkok, Thailand
4. Bodhisattwa Rakshit, Nilanjan Chattaraj, "Diabetic Retinopathy Diagnosis using a Tiny InceptionResNetV2 Model on Retinal Images", *5th International Conference on Frontiers in Computing and Systems (COMSYS-2024)*, Goa, December 13-15, 2024
5. Debabrata Bej, Nilanjan Chattaraj. (2024) "Design of a portable, customizable device with GPS integration to track location-specific real-time outdoor PM2.5 pollution". *IEEE International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE'24)*. February 22-23, 2024

6. Bodhisattwa Rakshit, Rounak Das, Nilanjan Chattaraj, "Detection-Accuracy Enhancement of COVID-19 from Multi-Class Lung Diseases by Instrumenting CLAHE Integrated Deep Learning Technique", *IEEE International Symposium on Sustainable Energy, Signal Processing and Cyber Security*, 2022
7. Debabrata Bej, Nilanjan Chattaraj, "Scope of ZnO based gas sensors for sensing CO emission from vehicle tailpipe-A Short Review", *IEEE MYSURUCON 2022*, Mysore
8. Pawan Kumar, Nilanjan Chattaraj, "A Cyber-Physical RPM Variometer using MQTT Protocol for Real-time Continuous Data-Acquisition", *International Conference on Connected Systems & Intelligence*, August 31, September 1-2, pp. 1-9, 2022.
9. Sanniva Bhattacharjee, Aryan Kanu, Arnab Roy Chowdhury, Soumyadeep Mondal, Nilanjan Chattaraj and Nirmal Baran Hui, "Low frequency Vibration Energy Harvester using Compliant Mechanism driven Piezoelectric Transformer", *Second International Conference on Sustainable Energy, Environment, and Green Technologies*, pp. 1-12, 2022
10. Billah, Md. M., Nilanjan Chattaraj, "Road Condition Detection Using Adaptively Chosen Deep Learning Model and Precautionary Special Guidance for Driver-Safety", *IEEE International Conference on Electronics, Materials Engineering and Nano-Technology (IEMENTech)*, 1-6, 2021,
11. Nilanjan Chattaraj, and Ranjan Ganguli. "Enhanced Performance of Piezoelectric Bending Actuator by Material Redistribution." *2020 International Symposium on Devices, Circuits and Systems (ISDCS)*. IEEE, 2020.
12. Nilanjan Chattaraj, "Shape-Memory Alloy Actuated Low Frequency Astable Electromechanical Multivibrator." *2018 IEEE SENSORS*. IEEE, 2018.
13. Nilanjan Chattaraj G. K. Ananthasuresh, R. Ganguli, "A distributed compliant mechanism for a piezo-actuated flapping wing ", *2nd international and 17th National Conference on Machines and Mechanisms*, Kanpur, India, 16-19 Dec, 2015
14. Nilanjan Chattaraj and Ranjan Ganguli. "Multiobjective optimization of piezoelectric bimorph actuator with rigid extension." *Active and Passive Smart Structures and Integrated Systems 2015*. Vol. 9431. International Society for Optics and Photonics, 2015.
15. Nilanjan Chattaraj and Ranjan Ganguli. "Electromechanical analysis of tapered piezoelectric bimorph at high electric field." *Behavior and Mechanics of Multifunctional Materials and Composites 2015*. Vol. 9432. International Society for Optics and Photonics, 2015.
16. Nilanjan Chattaraj and Ranjan Ganguli, "Electromechanical analysis of bimorph piezoelectric actuator to estimate optimal geometry for flapping wing micro air vehicle", *Indian Conference on Applied Mechanics*, Indian Institute of Technology Madras, India, 4th - 6th July, 2013,
17. Nilanjan Chattaraj and Ranjan Ganguli. "Modeling of artificial dragonfly wing, and comparison of structural properties for various wing with different vein materials and venation patterns", *ACMFMS Proceedings of Mechanics of Functional Materials and Structures*, Delhi, India, pp. 95-98, 2012, *Narosa Publishing house - Delhi*, ISBN: 978-81 8487-248-4
18. Nilanjan Chattaraj and Anindya Sundar Dhar. "Random Access Analog Memory (RA2M) for Video Signal Application." *2012 25th International Conference on VLSI Design*. IEEE, 2012.

PATENT

1. Granted Patent ID: 494320.
 Nilanjan Chattaraj, Nirmal Baran Hui, Dr. Hardik Rajyaguru, *Automatically Pressurised Ambu Bag System*, ID: IN202031017748, Granted Date: 04-01-2024
<https://patentscope.wipo.int/search/en/detail.jsf?docId=IN340501858& cid=P11-KXGFCS-05074-1>

TEACHING

1. Structronics
2. Mechatronics
3. Biomedical Instrumentation
4. Measurements & Instrumentation
5. Electronic System Design

6. IoT
7. Embedded AI & Robotics
8. Network Analysis & Synthesis

RESEARCH GUIDANCE

POST DOC RESEARCHER

- | | |
|---------------------------|------------|
| 1. Dr. Shatrughan Jaiswal | Since 2024 |
|---------------------------|------------|

Ph.D. SCHOLARS

- | | |
|------------------------|----------------------|
| 1. Dr. Debabrata Bej, | Completed |
| 2. Suman Biswas, | Under Pre-submission |
| 3. Neha Kumari | Ongoing |
| 4. Mrinal Goswami | Ongoing |
| 5. Sourav Pal | Ongoing |
| 6. Molay Mondal | Ongoing |
| 7. Al mamun Sheikh | Ongoing |
| 8. Bodhiswatta Rakshit | Ongoing |

B.Tech/M.Tech Thesis Guidance

Eighteen B.Tech. Theses and Eight M.Tech. Theses

RECOGNITIONS

- Best Poster Presentation Award, Neha Kumari, Nilanjan Chattaraj, on Piezoelectric materials for Energy Harvesting Application: Enabling Self-Powered System in IEEE SAFS 2025 South Asia Ferroelectric Symposium Bengaluru, India August 5-8, 2025 held at IISc Bengaluru
- Best Paper Award, Debabrata Bej, Nilanjan Chattaraj, in the IEEE and ACM collaborative international conference (ic-ETITE'24) on Emerging Trends in Information Technology and Engineering (ic-ETITE'24). February 22-23, 2024, for the Design of a portable, customizable device with GPS integration to track location-specific real-time outdoor PM2.5 pollution.
- Received "[Outstanding Reviewer](#)" award for the IEEE Transactions on Instrumentation and Measurement (TIM), IEEE Society, for the year 2023.
- Received "[Outstanding Reviewer](#)" award for the IEEE Transactions on Instrumentation and Measurement (TIM), IEEE Society, for the year 2022.
- Received "[Outstanding Reviewer](#)" award for the IEEE Transactions on Instrumentation and Measurement (TIM), IEEE Society, for the year 2021.
- Received recognition as "Innovation Ambassador" by the Ministry of Education's Innovation Cell, Government of India, 2021
- Achieved recognition for developing a Low-cost Semi-automatic AMBU Bag Pressurization System through the publication in "Science & Technology -efforts in India on COVID-19", by Department of Science and Technology, Govt. of India, on 10th April, 2020 (Source)
https://www.indiascienceandtechnology.gov.in/research/pranesh-automatically-pressurized-ambu-bag?field_area_id=2396
https://www.indiascienceandtechnology.gov.in/research/pranesh-automatically-pressurized-ambu-bag?field_area_id=2440

- Won Best New Entrant Graduate Team award in 32nd International Student Design Competition on Distributed Logistics in an Urban setting Using Small Unmanned Aerial vehicles organized by American Helicopter Society, USA, 2015.
<https://vtol.org/files/dmfile/2015-student-design-press-release.pdf>
- Certificate of merit under National Scholarship Scheme by West Bengal Board of Secondary Education in recognition of the high position secured in Secondary Examination, 1999

ADMINISTRATIVE RESPONSIBILITIES

2022-Present:

- Faculty in Charge of ECE Research & Development Lab, National Institute of Technology, Durgapur
- Faculty in charge of Web development of ECE departmental website. National Institute of Technology, Durgapur

2023-Present:

- Member of the Governing Council of Institute of Smart Structures and Systems (ISSS), Website: <https://isssonline.in/>

2022-2024:

- Editor of Sukshma, The ISSS Newsletter. Institute of Smart Structures & Systems (ISSS), Website: <https://isssonline.in/>

2021 - Present:

- Member of Centre for Digital Learning (CDL), National Institute of Technology, Durgapur
- Faculty advisor of Electronics & Communication Engineering Students' Society (ECESS), National Institute of Technology, Durgapur

2020 - 2024:

- Executive Committee member of Innovation and Incubation Cell, National Institute of Technology, Durgapur

2019 - 2024 :

- Member of Networking and Computing Division, Computer Centre, National Institute of Technology, Durgapur
- Departmental Representative of Institute's Annual Performance Report Committee, National Institute of Technology, Durgapur

2019 - 2022 :

- Faculty in Charge of Embedded System Laboratory, National Institute of Technology, Durgapur

2017 - 2018 :

- Faculty in Charge of Instrumentation Laboratory, Birla Institute of Technology and Science, Pilani
- Member of Departmental Research Committee, Birla Institute of Technology and Science, Pilani

MISCELLANEOUS

1. Organizing Principal Coordinator of 21st Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 21-04-2026 to 25-04-2026. Supported by MeitY.
2. Organizing Principal Coordinator of 20th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 23-02-2026 to 27-02-2026. Supported by MeitY.
3. Organizing Principal Coordinator of 19th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 27-01-2026 to 31-01-2026. Supported by MeitY.
4. Organizing Principal Coordinator of 18th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 05-01-2026 to 09-01-2026. Supported by MeitY.
5. Organizing Principal Coordinator of 17th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 03-11-2025 to 07-11-2025. Supported by MeitY.
6. Organizing Principal Coordinator of 16th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 01-09-2025 to 05-09-2025. Supported by MeitY.
7. Organizing Principal Coordinator of 15th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 18-08-2025 to 22-08-2025. Supported by MeitY.
8. Organizing Principal Coordinator of 14th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 28-07-2025 to 01-08-2025. Supported by MeitY.
9. Organizing Principal Coordinator of 13th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 14-07-2025 to 18-07-2025. Supported by MeitY.
10. Organizing Principal Coordinator of 12th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 23-06-2025 to 27-06-2025. Supported by MeitY.
11. Organizing Principal Coordinator of 11th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 26-05-2025 to 30-05-2025. Supported by MeitY.
12. Organizing Principal Coordinator of 10th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 21-04-2025 to 25-04-2025. Supported by MeitY.
13. Organizing Principal Coordinator of 9th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 24-03-2025 to 28-03-2025. Supported by MeitY.
14. Organizing Principal Coordinator of 8th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 24-02-2025 to 28-02-2025. Supported by MeitY.
15. Organizing Principal Coordinator of 7th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 27-01-2025 to 31-01-2025. Supported by MeitY.
16. Organizing Principal Coordinator of 6th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 02-12-2024 to 06-12-2024. Supported by MeitY.
17. Organizing Principal Coordinator of 5th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 30-09-2024 to 04-10-2024. Supported by MeitY.

18. Organizing Principal Coordinator of 4th Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 29-07-2024 to 02-08-2024. Supported by MeitY.
19. Organizing Committee Member of the Student Contest event in International Conference on Micro, Nano and Smart Systems IC-MNSS 2024, 9th to 12th July 2024, IISc, Bengaluru, <https://icmnss.in/>
20. Organizing Committee Member of 4th Energy System Modeling and Optimization Conference (ESMOC 2024), 2024, NIT Durgapur, India
21. Organizing Principal Coordinator of 3rd Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 10-01-2024 to 14-01-2024. Supported by MeitY.
22. Organizing Principal Coordinator of 2nd Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 24-07-2023 to 28-07-2023. Supported by MeitY.
23. Adjunct Faculty in S P Jain School of Global Management to teach subject entitled "Embedded AI and Robotics", 2023 ~
24. Organizing Principal Coordinator of 1st Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 08-05-2023 to 12-05-2023. Supported by MeitY.
25. Organizing Principal Coordinator of DST Sponsored Synergistic Training Program Utilizing the Scientific & Technological Infrastructure (STUTI), Department of Electronics and Communication Engineering, National Institute of Technology Durgapur, 19th-25th September, 2022
26. Organizing Committee Member of 3rd Energy System Modeling and Optimization Conference (ESMOC 2021), December 5-7, 2022, NIT Durgapur, India
27. Organizing Principal Coordinator of "Research Scholar Day-22", Department of Electronics and Communication Engineering, National Institute of Technology Durgapur, 23rd September, 2022
28. Organizing Committee Member of 2nd International Workshop on Societal Computing for the Internet of Things & You (SoCieTY 2023), Co-located with ICDCN 2023, 7th January 2023
29. Organizing Principal Coordinator of "Research Scholar Day-21", Department of Electronics and Communication Engineering, National Institute of Technology Durgapur, 28th-29th December, 2021
30. Organizing Committee Member of "1st International Workshop on Societal Computing for the Internet of Things & You (SoCieTY)" Co-located with ICDCN 2020, 4th January 2020
31. Organizing Principal Coordinator of Summer course on "Robotics & AI", 24th June to 28th June, 2019

INVITED TALKS on

1. "From Sensors to Cloud: Microcontroller-Based Data Acquisition and Cloud Analytics" in the one-day-seminar on "From Sensors to Cloud: Microcontroller-Based Data Acquisition and Cloud Analytics" organized by the Durgapur Local Centre of The Institution of Engineers (IEI) in association with the department of Computer Science & Engineering, Bengal College of Engineering & Technology Durgapur, 18th April 2026
2. "The Hardware Based Approach of Smart Healthcare System Embedded with IoT and AI/ML" in the Advanced Entrepreneurship and Skill Development Programme (A-ESDP), on "Smart Healthcare System using IoT and AI/ML" during 27th Feb -2nd Mar 2024, NIT Sikkim.
3. "AI in Embedded Systems" in FDP on "Artificial Intelligence and Its Application in VLSI", SRM Institute of Science and Technology, Delhi NCR Campus, Ghaziabad, India, on 11-01-2024
4. "Embedded Mechatronics of UAV" in 2nd Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 24-07-2023 to 28-07-2023. Supported by MeitY.
5. "Embedded Mechatronics of UAV" in 1st Bootcamp on Unmanned Aerial Systems & Related Technology, organized by National Institute of Technology Durgapur, from 08-05-2023 to 12-05-2023. Supported by MeitY.

6. "Embedded Measurement System (EMS) and its adoption of AI & ML" in Synergistic Training Program Utilizing the Scientific & Technological Infrastructure (STUTI) programme organized by the Department of Electronics and Communication Engineering of National Institute of Technology Durgapur, in collaboration with the Indian School of Mines (ISM, IIT) Dhanbad, 19th-25th September, 2022.
7. Appeared as panellist in "Sikhai Sampad" panel discussion, organized by News18 Bangla TV network on 10th August, 2022.
8. "The assistive Robosapiens with human-like emotions: its fundamental and technological challenges" in International Symposium on Robotics in Industry, Agriculture, and Healthcare, jointly organized by Indian Institute of Technology Kanpur and Waseda University, on 9th and 10th April, 2022.
9. "Intellectual Property Rights (IPR) and IP management for start-up" in "Workshop on Intellectual Property Rights (IPRs) and IP management for start-up" organized by Innovation and Incubation Council, National Institute of Technology Durgapur, 16th December, 2021
10. "IoT and IIoT associated to Biomedical Applications" in "Online Short-Term Course on Internet of Things (IoT) Opportunities, issues and challenges for control and Biomedical Applications" organized by National Institute of Technology Jalandhar, 6th to 10th October, 2021.
11. "Industrial IoT" in Training course on Industry-Oriented Internet of Things (IoT) organized by CSIR-CMERI Durgapur and National Institute of Technology, Durgapur, 15th to 19th February, 2021
12. "Sensors and Actuators on Assistive Devices" in AICTE Training and Learning (ATAL) Academy Programme on "Robotics and Assistive Technology" organized by National Institute of Technology, Durgapur, 24th -28th November, 2020
13. "Mechatronics: The way of Giving Life to Robotics" in Robotics lecture series organized by Department of Mechanical Engineering, Asansol Engineering College, Asansol, during 19th to Feb-23th Feb, 2020
14. "Industrial IoT and cyber manufacturing systems" in IoT Applications in Advanced Manufacturing Workshop organized by CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur, 3th to 4Th February, 2020
15. "Integration Methods of Sensors and Actuators with Mechanisms" in AICTE Training and Learning (ATAL) Academy Programme on "Robotics" organized by National Institute of Technology, Durgapur, 9th to 13th December, 2019

REVIEWER

- IEEE Transactions on Instrumentation & Measurement
- IEEE Robotics and Automation Letters
- IEEE/ASME Transactions on Mechatronics
- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control
- Journal of Intelligent Material Systems and Structures, Sage
- Journal of Vibration Engineering & Technologies, Springer
- Applied and Computational Mechanics
- Applied Sciences, MDPI
- Biomedical Signal Processing & Control

PROFESSIONAL MEMBERSHIP

- Life Member of Institution of Engineers (MEI)
- Life Member of International Association of Engineers (MIAENG)
- Life Member of Institute of Smart Structures and Systems (MISSS)